

Metaphor, Humor, and Psychological Androgyny

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Mio and Graesser found that metaphors that disparaged the topic of a sentence were perceived to be more humorous than metaphors that uplifted the topic. Moreover, there was evidence that male participants found these disparaging metaphors to be more humorous than did female participants. To further test this finding, in Study 1 we administered the Bem Sex-Role Inventory–Revised and used the methodology from the Mio and Graesser study. We found that sex-typed men found the disparaging metaphors to be the most humorous, sex-typed women found the disparaging metaphors to be the least humorous, and androgynous men and women fell in between the sex-typed groups. In Study 2 we failed to replicate gender differences using a different methodology, although all groups still found disparaging metaphors more humorous. We question the usefulness of the Bem Sex-Role Inventory–Revised in today’s society.

The topic of humor has been of interest to researchers for a long time. Graesser, Long, and Mio (1989) examined different theories of humor. These theories include the superiority (disparagement), incongruity, and tension-relief theories (Morreall, 1987; Raskin, 1985). The superiority theory seemed to have the most support. In fact, Morreall indicated, “Laughter is nothing but an expression of our sudden glory when we realize that in some way we are superior to someone else.” The common use of put-downs is an application of this superiority theory. So, when someone tells a “dumb guy” joke, like “This dumb guy declared that he knew the capitols of every state, so someone asked, ‘So, what is the capitol of Nevada?’ and the guy replied, ‘Capital N,’” you will know that the person is engaging in superiority or disparaging humor, placing his or her intelligence over that of the butt of the joke. An example of the incongruity theory is anachronistic humor, such as the old Flintstones cartoons where the characters in the Stone Age are enjoying the conveniences of modern life. Punch lines of every joke fall into the tension-relief theory, as the body of the joke creates a tension, and the punch line provides the relief of that tension. Consistent with the superiority theory, Graesser et al. (1989) found that aggressiveness predicted funniness ratings of jokes better than other contending theories of humor.¹

In connecting metaphor with humor, Mio and Graesser (1991) presented participants with metaphors that either disparaged or uplifted the topic of the sentence. Disparaging metaphors compared a high-status topic with a low-status vehicle, whereas nondisparaging or uplifting

¹However, just because the superiority theory of humor received the most empirical support, this does not suggest that the other theories are incorrect. In fact, one might argue that all three theories express a different aspect of humor, and the most funny jokes integrate all three elements.

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metaphors compared low-status topics with high-status vehicles. For example, “My butcher is a surgeon among meat cutters” is a nondisparaging or uplifting metaphor, as a relatively low-status item, “butcher,” is compared to a relatively high-status item, “surgeon.” “My surgeon is a butcher among doctors” is a disparaging metaphor.² They termed these metaphor pairs “mirror metaphors” and presented uplifting metaphors and their disparaging counterparts to participants and asked them to decide which of the two metaphors was the funnier of the two. The researchers found that disparaging metaphors were perceived to be more humorous than uplifting metaphors. This was particularly true with respect to men, as male disparaging humor scores were significantly greater than female disparaging humor scores. Certainly, Pollio (1996) would agree that disparaging metaphors should be more humorous, as he rhetorically asked: “Can it be that a joke or humorous remark is nothing more than a mean-spirited metaphor, or, at least, one gone bad and that a metaphor is nothing but a polite form of a more mean-spirited joke or putdown?” (p. 233).

GENDER ISSUES

Bem (1974, 1977, 1981, 1993) discussed how gender serves as a filter through which we perceive the world. This gender schema influences our perceptions, feelings, and behaviors and is one of the most dominant schemas influencing us. This is because society is set up to reinforce the gender distinctions, from the toys with which children play to the clothes we wear to the employment opportunities available to the sexes. As Bem (1993) stated,

All of these gender-polarizing social practices do two things simultaneously. They program different social experiences for males and females, respectively, and they communicate to both males and females that the male-female distinction is extraordinarily important, that it has—and ought to have—intensive and extensive relevance to virtually every aspect of human experience. (p. 146)

With respect to humor, it does appear that boys and men both express more humor than girls and women (Martin, 2007; McGhee, 1979; Pollio & Edgerly, 1976; Rappoport, 2005) and also appreciate more aggressive humor than do girls and women (Cantor, 1976; Martin, 2007; Martin, Puhlik-Doris, Larsen, Gray, & Weir, 2003; McGhee, 1979; Rappoport, 2005). However, as some have indicated, boys and men may have expressed more preference for aggressive humor than girls and women because women had traditionally been the targets of the aggression more than men had been (Crawford, 2003; Crawford & Gressley, 1991; Martin, 2007; Martin et al., 2003). Another factor contributing to this asymmetry is that men tend to tell more formal jokes, whereas women tend to tell more humorous personal anecdotes (Martin, 2007).

Rappoport (2005) asserted that three generalizations were “common knowledge” among humor researchers: (a) gender humor is universal, (b) men disparage women in jokes more than the reverse, and (c) women are more likely to laugh at jokes told by men than the reverse. Rappoport directly connects these issues to the issue of sex and power. Because men are more in positions of power but are threatened by women, they tend to tell jokes directly depreciating

²This metaphor pair was first presented by Sam Glucksberg years ago at the 1990 American Psychological Association Convention in Boston, MA, which served as the inspiration for our development of uplifting and disparaging metaphor pairs for the purpose of investigating humor.

women in order to maintain their power. Women, on the other hand, tend to be more indirect in their humor by telling jokes and stories that are subtle and ironic. Sexist humor seems to have a utility function for sexist men. Ford, Boxer, Armstrong, and Edel (2008) found that sexist jokes seemed to allow men categorized as sexist to donate less money to women's organizations or to cut more money from the budgets of such organizations. As Ford et al. concluded, "Sexist participants took advantage of the local prejudiced norm to release their prejudice against women without fears of disapproval from others" (p. 168).

On a more positive level, Mio and Graesser (1991) speculated that men may resonate more to jokes because telling jokes is one of the few expressions of intimate feelings allowed to men, which "enables males to maintain a masculine stance while still addressing their intimacy needs" (p. 91). Juxtaposed with Martin's (2007) observation that men tend to tell more formal jokes and women tend to tell more personal anecdotes, the Mio and Graesser speculation may suggest that jokes afford men a formal and prescribed way to express their intimacy needs in a socially appropriate manner. These jokes are much less threatening than personal anecdotes because they do not involve exposing men's personal feelings or values that are needed in such anecdotes.

To the extent that boys and men are socialized to be more aggressive, we predicted that sex-typed men, as measured by Bem's Sex-Role Inventory-Revised (BSRI-R), would have higher disparaging humor scores in selecting mirror metaphor pairs, sex-typed women would have the lowest disparaging humor scores, and androgynous men and women would have scores in between the two sex-typed groups.

STUDY 1

Method

Participants

Over 200 participants from the Human Subject Pool at Washington State University were used. From this initial pool of participants, 136 were selected, as described in the Results section. Of this final pool of participants, 63 were men and 73 were women.

Materials

BSRI-R. We used the BSRI-R developed by Bem (1977), who improved on her 1974 original BSRI.³ The BSRI-R is composed of 30 items taken from the BSRI. The items rotate among traditional masculine, traditional feminine, and neutral items, asking participants to rate each item on a 7-point scale as to the degree to which the respective items related to themselves.

Mirror metaphor booklets. We used the mirror metaphors used in the Mio and Graesser (1991) study. There were 32 mirror metaphors comparing a high-status item to a low-status item and vice versa. Below are some examples of these mirror metaphors:

³We originally used the BSRI, which is comprised of 60 items, but we rescored these items using the subset used in the BSRI-R. As we will discuss later, we could not replicate this study using only the 30-item BSRI-R because we had difficulty obtaining sex-typed males in later studies.

- 1a. *My surgeon is a butcher among doctors.*
- 1b. *My butcher is a surgeon among meat cutters.*
- 2a. *Harvard is a sewer among elite universities.*
- 2b. *This sewer is the Harvard of waste systems.*
- 3a. *Caesar was the worm of emperors.*
- 3b. *The worm is a Caesar of the garden.*

Half of the mirror metaphors had the high-status item first and half of the mirror metaphors had the low-status item first. There were eight mirror metaphors per page, and the resultant four pages were counterbalanced to control for fatigue effects.

Procedures

Participants first filled out a coversheet that asked them to indicate if they were male or female, if English were their preferred language, and if not, what language was their preferred language. Because metaphor and other forms of figurative language are quite often difficult for nonnative speakers of a language, we did not include any speaker whose preferred language was not English. Participants then responded to the BSRI-R. Finally, participants were instructed to place a check mark next to the metaphor they felt was the funnier of the two mirror metaphors. Participants were allowed to work at their respective paces.

Results

Using scores from the BSRI-R, we categorized 32 men and 34 women as being sex-typed and 31 men and 39 women as being androgynous from our initial pool of 200+ participants. We totaled the number of disparaging metaphors selected as the funnier of the metaphor pair and subtracted the number of uplifting metaphors selected. Thus, positive scores indicated that the participant felt that disparaging metaphors were more humorous than their uplifting metaphor counterparts, whereas negative scores indicated that the participant felt that uplifting metaphors were more humorous.

In using the aforementioned classifications, 59% of the sex-typed females felt that disparaging metaphors were funnier, 71% of the androgynous participants felt that disparaging metaphors were funnier, and 78% of the sex-typed males felt that disparaging metaphors were funnier. It is notable that although these results support our predictions that sex-typed women would find disparaging metaphors least funny, sex-typed men would find disparaging metaphors the most funny, and androgynous individuals would be somewhere in between these two groups, in general all groups did find disparaging metaphors to be funnier than their uplifting counterparts. This supports the Graesser et al. (1989) study, which indicated that superiority is a major explanation for humor. Table 1 displays the distribution of our participants' scores.

STUDY 2

We attempted to extend the previous findings by using a different methodology. Subjects in Study 1 selected which of two alternatives was more humorous in a forced-choice methodology.

TABLE 1
Number of Participants Rating Disparaging Versus Uplifting Metaphors
as the More Humorous

<i>Androgyny Type</i>	<i>Those Rating Disparaging Metaphors More Humorous</i>	<i>Those Rating Uplifting Metaphors More Humorous</i>
Sex-typed women	20	14
Androgynous men and women	50	20
Sex-typed men	25	7

In Study 2, we used a metaphor-completion task that presented our metaphor stems with the vehicle position left blank. We decided to use this methodology in order to determine if people will spontaneously create disparaging metaphors thought to be humorous, and if sex-typed men would engage in this kind of construction more than sex-typed women.

Method

Participants

We began collecting data several years after Study 1 due to a change of universities. Perhaps due to a change in cohorts, perhaps due to a change in venues, perhaps due to a change in ethnic diversity, perhaps due to a change in societal norms, or perhaps due to a combination of these reasons, we had a difficult time obtaining an adequate sample size that included a number of sex-typed men. We initially collected over 100 participants in our department's human subject pool, yielding only one or two sex-typed men. We then received permission to collect data in business and engineering courses at our university, but these 50 participants yielded only two or three more sex-typed men. We then went to two other area universities, one a science and engineering college and the other a large university drawing participants from a general education course that drew students from a wide range of majors, but again, we added only a handful more sex-typed men to our pool of participants. Finally, we collected data from a church and some local rodeo contests. Ultimately, we collected data on 137 men and 236 women in order to yield enough sex-typed men if we used a more relaxed criterion for analysis in our study. We classified 24 men and 27 women as sex-typed and 24 men and 32 women as androgynous, being more lax in our criteria on sex-typed men than in Study 1.

Materials

Research participants first filled out a cover sheet that asked if they were male or female; if English were their preferred language; and if not, what was; and what was their self-identified ethnicity. They then completed the BSRI-R. Finally, they completed 32 metaphor stems by circling one of three alternatives underneath stems. Half of the metaphor stems had high-status items in the topic position, and half of the stems had low-status items in the topic position. All of these stems had high-, medium-, and low-status items as vehicle alternatives. Participants were instructed to circle the alternative that completed the metaphor by making it the most humorous. They were given the example:

Mickey Mouse is the ____ of cartoon animals.
 Goofy Minnie Mouse Pluto

Goofy was circled, and we explained that it seemed to make the metaphor more humorous than if one of the other alternatives were circled.

We were interested in the 16 high-status topics, as these items had the most direct implication for the superiority theory of humor. Disparagement scores were calculated by subtracting the number of high-status vehicles chosen from the number of low-status vehicles chosen for the high-status topic metaphors. The number of medium-status vehicles chosen was considered neutral with respect to disparagement, so they were not calculated into the disparagement score.

Procedures

Participants filled out the booklets containing the cover sheet, the BSRI-R, and the metaphor stems. They were allowed to work at their respective paces and thanked for their participation. The instructor of the business courses on our campus asked us to talk about our study and our expectations when we collected the data in his course, and the instructor of the engineering course on our campus asked us to return to the class after our analysis to inform students of the results. Other than that, the other participants and instructors were satisfied with the very complete informed consent we provided and the extra credit they were receiving for experimental participation.

Results

Given that each participant received 16 metaphor stems with a high-status item in the topic position, this meant that the range of disparagement scores was potentially from -16 to +16. Any positive scores indicated that the participant judged disparaging metaphors to be more humorous, and any negative scores indicated that uplifting metaphors were more humorous.

The pattern of disparagement scores was not as we predicted (see Table 2). We predicted that sex-typed men would yield the highest disparagement scores, sex-typed women would yield the lowest disparagement scores, and androgynous men and women would be somewhere in the middle. As it turned out, sex-typed men had the highest disparagement scores, androgynous men had the lowest disparagement scores, and both sex-typed women and androgynous women were in between these two scores, although they were much closer to the sex-typed men’s scores than they were to the androgynous men’s scores. However, this pattern of response did not yield statistically significant differences overall or in a Sex×Androgyny interaction, $F(1,103) = 1.40$, $p = .240$.

TABLE 2
 Disparagement Scores of Sex-Typed Men
 and Women and Androgynous
 Men and Women

	<i>Sex-Typed</i>	<i>Androgynous</i>
Men	4.08	1.04
Women	3.33	3.44

It is important to note that the intercept was significant, $F(1,103) = 15.886, p < .001$. What this indicates is that both men and women had significantly positive scores, so both sexes felt that disparaging metaphors were more humorous.

Discussion

The results from Study 2 did not support our predictions that sex-typed men would engage in more disparaging humor than sex-typed women. It is important to note, however, that all groups yielded disparagement scores that supported the superiority theory of humor.

It is significant to note that we had a very difficult time trying to secure enough participants to yield a group of sex-typed men as measured by the BSRI-R. We ended up having to accept much lower BSRI-R scores than we previously did when collecting data for Study 1 in order to obtain enough sex-typed men to conduct meaningful analyses. Most of our data for Study 1 were collected in the early 1990s and in a geographic area that was 95% White. Nearly all of our data for Study 2 were collected in the mid-1990s to 2000s in an area that had a high mix of ethnic minorities. However, in examining our data for Study 2, White and ethnic minority participants did not appear to score statistically differently from one another, either on the BSRI-R or on our metaphor completion task. As we advance in society, people—and particularly college-age individuals—may have learned that traditional masculine attributes such as “forceful” or “aggressive” without a balance of traditional feminine attributes such as “understanding” or “compassionate” are not as socially acceptable as they were in the past.

GENERAL DISCUSSION

Overall, our results support the superiority theory of humor. This theory suggests that what makes things funny is our sudden realization of our superiority over someone or something else. Based on this theory, it stands to reason that metaphors that disparage as opposed to uplift the topic of the metaphor would be perceived to be more humorous. The Mio and Graesser (1991) study found that not only did their participants find disparaging metaphors more humorous than uplifting metaphors, but men seemed to have an even stronger preference. Study 1 replicated and extended the Mio and Graesser study by categorizing participants into sex-typed men, sex-typed women, and androgynous men and women using the BSRI-R, then having participants perform the Mio and Graesser metaphor task. As we predicted, sex-typed men were much more likely to select disparaging metaphors as being more humorous, sex-typed women were much less likely to select disparaging metaphors, and androgynous men and women were somewhere in between. However, all groups did select a higher percentage of disparaging metaphors than uplifting metaphors, so these humorous preferences were a matter of degree, and they all support the superiority theory of humor.

After a passage of time,⁴ Study 2 was designed as a follow-up study. Study 2 asked participants to select the vehicle term from among three alternatives in a metaphor completion task methodology. The alternatives were a high-status item, a medium-status item, and a low-status

⁴The author moved from one university to another and was also engaged in conducting another line of research for several years before returning to this line of inquiry.

item. Overall, our participants tended to select low-status items to make the metaphors humorous, thus supporting the superiority theory of humor. Unfortunately, androgyny status was not a determinant of disparagement scores. Sex-typed men and women and androgynous men and women all tended to disparage the topics equally.

It is significant to note that we had a difficult time trying to obtain enough research participants to yield a truly sex-typed men's category. Of the 137 men collected in our psychology human subject pool, courses in business and engineering, large general education courses, church youth groups, and rodeos, we classified only 24 as being sex-typed, and the male sex-typed criterion was a lowering of masculine scores from Study 1. However, the fact that all four groups scored statistically similarly to one another suggests that a clearly sex-typed men's group may not have made any difference in our results. Men and women of all types seem to support the superiority theory of humor, and men and women of all types scored much more similarly to one another on this task than on our forced-choice task.

What is interesting about our results is that we did have such a difficult time finding sex-typed men, at least as measured by the BSRI-R. This might suggest that the BSRI-R may not be a useful instrument anymore. For example, some items such as "Forceful," "Dominant," and "Aggressive" may be more blatantly archaic in today's culture, as these items were rated fairly low by all participants, thus eliminating some items specifically targeting traditional masculinity. It would be interesting if others have found the BSRI-R to be less useful currently than in years past.

Another interpretation of the relatively poor predictive power of the BSRI-R may be that after years of supporting the need for a balance between traditionally categorized masculine and feminine characteristics, psychologists may have had an impact on society. It may no longer be acceptable for men to express only masculine characteristics. If they do display masculine characteristics, they may need to also display characteristics such as caring in order to demonstrate that they are aware of our changing societal values.

It is interesting to note that we did not find it difficult to find an adequate number of sex-typed women in our samples. Women may still be receiving societal messages that it is acceptable for them to display only feminine characteristics. Certainly, at least since the classic Broverman studies (Broverman, Broverman, Clarkson, Rosenkrantz, & Vogel, 1970; Broverman, Vogel, Broverman, Clarkson, & Rosenkrantz, 1972), women who display traditional feminine characteristics are thought to be more mentally healthy women (but interestingly, mentally unhealthy individuals). Women who display only or primarily masculine characteristics are thought to be undesirable; women are encouraged to be feminine. Thus, for all of the societal changes we have seen over the years, and all of the advances women have made in professions traditionally thought to be masculine, men's personality characteristics may have seen more change than women's personality characteristics, at least in terms of self-report measures.

Obviously, a limitation of our studies is that the vast majority of our research participants came from college populations. As college students grow and mature, they may experience changes in their societal roles, including their sex roles. There is a saying that college years are an extension of adolescence, so our earlier speculations about the BSRI-R may be more appropriately directed towards the population we are studying. The BSRI-R may very well still be relevant to today's society, but because of the shifting of maturation, it may be more appropriate to measure people in their 30s and 40s as opposed to the college population of 20-year-olds. Moreover, our metaphor stimuli were not jokes per se. We asked participants

to either judge which of two metaphors was more humorous or to construct the most humorous metaphor by selecting one of three alternatives. “More humorous” is not equivalent to “very funny,” so perhaps our task will not differentiate men’s and women’s respective appreciation of humor. Still, disparaging metaphors were thought to be more humorous in comparison to alternatives, so we are still confident that our results are consistent with the superiority theory of humor. Moreover, as Crawford and her colleague have indicated (Crawford, 2003; Crawford & Gressley, 1991), the reason why women tended to not appreciate hostile humor in the past was because women tended to be the targets of this hostility. As the present task involved the disparagement of all kinds of different targets (men, women, animals, institutions, etc.), women were not specifically targeted for the hostility, so there was no particular reason to expect that women would express disparaging humor less than men.

Researchers have attempted to examine the elements of humor from time to time in the past. Of the three major theories of superiority, incongruity, and tension-relief, there seems to be the most support for the superiority theory of humor (Mio & Graesser, 1991). Our overall results support this theory regardless of gender. However, more research on pure jokes is warranted, as our use of metaphors is only suggestive of humor and not a direct presentation of humor. As Pollio (1996) discussed, although both metaphor and humor involve split reference, the task of humor is to emphasize the boundary between these references, whereas the task of metaphor is to fuse these references to form a different kind of understanding. Thus, although metaphors *can* be humorous, this is not the primary task of this rhetorical device.

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